Supplementary Statement
of

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before

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I should like at this time to clarify the meaning of the word "Advisory" with respect to its significance within the name of the National Advisory Committee for Aeronautics. For the past 30 years, the name of the Agency has been a misnomer. The NACA is an operating agency; it is not an advising agency.

When the Congress established the NACA in 1915, one of the responsibilities assigned to the new agency was that, in addition to directing the scientific study of the problems of flight, with a view to their practical solution, and in addition to determining the problems which should be experimentally attacked, the new agency was directed to, and I quote, "discuss their solution and their application to practical questions."

For the first ten or a dozen years, the NACA -- the Committee, the NACA's board of directors if you will -- was very active in the business of giving advice. For example, in 1916, it strongly recommended that the Post Office Department establish an air mail service on an experimental basis, something that was begun two years later when Army pilots flew the

mail between Washington and New York. In 1917, acting in this advisory capacity, the Committee led in breaking the patent bottleneck that held back American aviation progress. Again, in the twenties, the Committee gave advice that resulted finally in passage of the Air Commerce Act, the "legislative cornerstone for the development of commercial aviation in America." From that time on, the NACA could and did concentrate on its prime responsibility -- the conduct of aeronautical research.

During the past 30 years, the technical staff of the NACA has frequently been called upon to serve in a consulting capacity on aeronautical matters. We stand ready to consult with the Military Services and the Industry on technical matters; we have not told other people what they should do.

For example, this past year the Air Force had the very difficult task of deciding which of two well-qualified companies should be awarded the contract to build the new Mach-three bomber (2,000 mph), the WS110-A later designated the B-70. The NACA worked very closely with each company. Each design incorporated the latest of NACA research progress, but this was because the companies saw how to make good use of the new NACA research information rather than because the NACA told them what they should do. The NACA consulted with the Air Force throughout the year on technical questions pertaining to the supersonic bomber concept, but at no time did we advise as to the superiority of one entry compared with the other.

Since the end of World War II, the research effort of NACA has been concentrated increasingly on problems affecting missiles and space craft, and today, more than half of our work is in such areas. In 1952, one of our research scientists developed a "blunt-nose" concept for the design of missile warheads. This breakthrough results in as much as 99 percent of the tremendous heat produced during the re-entry phase of missile flight being dissipated back into the air without entering the structure at all. The warhead design of every ICBM and IRBM in the United States today makes full use of this concept. It will be important also when space craft are designed capable of returning to earth.

Intensive NACA research has been done on the structural problems of more than a dozen missile projects. Similarly, NACA has done important research evaluating materials used in the nose cone of missiles, during re-entry conditions, as in the case of Polaris and Jupiter. Much NACA work has been done on high-energy fuels, such as fluorine-hydrogen, for rocket motors.

NACA help has also been given on problems peculiar to specific missiles. This type of research project is undertaken by NACA at the request of the Air Force, Navy, or Army, whichever service may be sponsoring the missile that may be in trouble. For example, in early flight tests of the Jupiter, fire and explosion destroyed the missile soon after the rocket was fired. Tests in one of our large supersonic wind tunnels made possible identification of the trouble, and suggestion of the remedy. What was happening was

that hot exhaust gases were eddying back up inside the rocket-engine structure where they caused fires or explosions. It was NACA research that provided the solution.

Today, the staff of the NACA, scientists and engineers and supporting personnel, numbers nearly 8,000. Problems of flight are studied at our research centers at Hampton, Virginia, Moffett Field, California, and Cleveland, Ohio, as well as at smaller field stations at Wallops Island, Virginia, Edwards, California, and in the near future, at Sandusky, Ohio. For the past 30 years, our mission has been the doing of research. We have done much to extend the frontiers of flight. Today, in the face of the new challenges of space technology, we feel we have just begun.